

Type ELD200 Signal Conditioning Unit

The Type ELD200 Signal Conditioning Unit is a versatile component which can be used to drive any of the range of **ELECTROLEVEL** tilt transducers.

The ELD200 can use an unregulated DC power supply from a wide range of sources anywhere in the range 6-28Volts.

This low power consumption unit can be scaled to provide an analogue output voltage representing full scale Tilt angle of the attached sensor of up to ± 2 Volts with respect to the internal zero angle reference voltage which is 2.5 Volts above the system ground.



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The output signal is suitable for driving external meters, data loggers, data acquisition systems and power amplifiers for control systems.

Proprietary circuit techniques match the Signal Conditioning Unit to the attached sensor and minimise the effects of temperature scale drift and temperature datum drift, thus contributing to the high precision of an **ELECTROLEVEL** system

Where long cables need to be driven, the ELD200 should be placed within 100 metres of the sensing head and the optional 4-20mA current loop used to drive the longer cable. (requires 24Volt supply)

The standard Signal Conditioning Unit is housed in a painted Aluminium box which provides screening against EMC effects.

For severe environments and specialist applications, the ELD200 can be supplied in weatherproof housings to IP67 protection or above.

Robust circular DIN style connectors are fitted to the ELD200 giving a long term reliable connection both to the sensing head and to the power supply/signal connector

The ELD200 is one of a family of Signal Conditioning Units suitable for driving the **ELECTROLEVEL** tilt transducers. Other units in the range include indicators with digital or analogue displays, with limit relays which operate at user definable angles and units which provide digital outputs in a variety of interface specifications.; Dual channel units are also available in all these options. For specialist applications, the Signal Conditioning Unit circuits can be supplied for mounting in Standard Rack systems with multi-channel cards and microprocessor control of the data acquisition function.

SPECIFICATION

ELD200 Signal Conditioning Unit

Output voltage	±2 volt d.c. maximum into open circuit with respect to datum reference at 2.5 Volts above system ground.
Output current	± 1 mA d.c. into short circuit (short circuit protected). (4-20mA current loop option)
Temperature Coefficient of Scale	0.1%/ ° C
Zero drift with temperature	100µV/° C
Electronic datum Adjustment Range	± 0.1 degrees with 0.5 degree Sensing Head ±1.0 degrees with 5.0 degrees Sensing Head
Operating Temperature Range to above specification	-15 °C to + 60 °C
Input Power Consumption	10 mA at 12V d.c.

External Connections

Sensing Head	Metal Screwlocking DIN style plug
D.C. supply and External Meter	Metal Screwlocking DIN style plug
Sensing head cable length	100 metres (maximum recommended)

Power Supply

6 to 28 volts d.c.

Physical Details

Enclosure	painted Aluminium non-weatherproof
Dimensions	147mm x 75mm x 50mm See DWG A15735
DIN rail Mounting Clip	Optional

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